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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,982	07/29/2003	Larry L. Bradford	ACA6114US2	7140

7590 08/10/2004

Ricahrd P. Fennelly  
Akzo Nobel Inc., Intellectual Property Dept.  
7 Livingstone Avenue  
Dobbs Ferry, NY 10522

EXAMINER

SERGEANT, RABON A

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 08/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/628,982	BRADFORD ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Rabon Sergent	1711	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 June 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

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1. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Within claim 1, the use of “about” to specify a value for the repeating unit renders the claims indefinite, because it raises ambiguity with respect to exactly what compounds are encompassed by the language. Furthermore, it is unclear how to interpret what numerical range is encompassed by “about 20”. The examiner has considered applicants’ response; however, as aforementioned, no definition has been provided to clearly delineate what values are encompassed by the range, “2 to about 20”. The response that decimal values are included by the language in no way resolves the issue, since it remains unclear with respect to exactly what compounds are encompassed by the formula wherein n is “about 20”. For example, there is no way to determine if a value of 22 or 21.5 is excluded by the language.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 3, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 255381 in view of Hardy et al. ('035) and further in view of Sicken et al. ('100).

The primary reference discloses flame retardant blends comprising a polyorganophosphate and a polyhalogenated aromatic flame retardant. See page 3 of the primary reference.

4. Though the primary reference is silent with respect to the specifically claimed oligomeric organophosphates, the position is taken that the claimed oligomeric organophosphates were known flame retardants at the time of invention. This position is supported by the teachings of Hardy et al. In view of the structural similarities between the oligomeric organophosphates of the primary and secondary references, the position is taken that one would have expected them to have comparable flame retarding qualities. Therefore, it would have been obvious to replace the organophosphate of the primary reference with the organophosphate of the secondary reference, so as to arrive at the instant invention. It has been held that it is obvious to utilize a component for its known function. *In re Linder*, 173 USPQ 356. *In re Dial et al.*, 140 USPQ 244. Furthermore, it has been held that it is obvious to substitute one equivalent for another. *In re Ruff*, 118 USPQ 343 (CCPA 1958). Additionally, the teachings within Sicken et al. are considered to render obvious the use of hydroxyl functional oligomeric phosphate flame retardants, since the flame retardant would have been chemically incorporated into the polymer.

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5. Claims 1, 2, 4, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biranowski ('200) in view of Hardy et al. ('035) and further in view of Sicken et al. ('100).

Biranowski discloses flame retardant blends, wherein the blends comprise an oligomeric organophosphonate and a halogenated phosphate ester. See column 3; column 5, lines 44+, and column 6, lines 1-24.

6. Though the primary reference is silent with respect to the specifically claimed oligomeric organophosphates, the position is taken that the claimed oligomeric organophosphates were known flame retardants at the time of invention. This position is supported by the teachings of Hardy et al. In view of the similarities between the oligomeric phosphorus compounds of the primary and secondary references, the position is taken that one would have expected them to have comparable flame retarding qualities. Therefore, it would have been obvious to replace the organophosphonate of the primary reference with the organophosphate of the secondary reference, so as to arrive at the instant invention. It has been held that it is obvious to utilize a component for its known function. *In re Linder*, 173 USPQ 356. *In re Dial et al.*, 140 USPQ 244. Furthermore, it has been held that it is obvious to substitute one equivalent for another. *In re Ruff*, 118 USPQ 343 (CCPA 1958). Additionally, the teachings within Sicken et al. are considered to render obvious the use of hydroxyl functional oligomeric phosphate flame retardants, since the flame retardant would have been chemically incorporated into the polymer.

7. The examiner has considered applicants' response; however, applicants have failed to address the examiner's arguments concerning the similarities of the respective oligomeric organophosphorus compounds, in terms of structure and function. The

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examiner has acknowledged that the respective oligomeric organophosphorus compounds of the primary and secondary references are not identical. The argued presence of phosphonate groups is not considered to be sufficient to remove the rejections, absent a convincing argument or evidence that one would not have expected the respective oligomeric compounds to function essentially equivalently as flame retardants.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.

R. Sergent  
August 8, 2004

  
RABON SERGENT  
PRIMARY EXAMINER